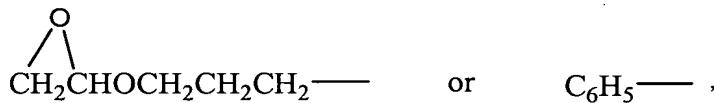


CLAIMS:

1. A metal/polymer laminate comprising at least two metal layers and at least one core polymer layer between at least two metal layers, wherein the polymer layer comprises a thermoplastic polymer and at least one silane of formula (I):



wherein R^2 is a C_{1-12} -hydrocarbon group containing one or more atoms selected from the group consisting of N, S and O,



R^3 is H-, C_{1-4} -alkyl;

R^1 is a C_{1-12} alkyl group that may be ethylenically unsaturated;

x is an integer of 1 to 3; and

y is an integer of 0 to 2.

2. The metal/polymer laminate of Claim 1, wherein the metal layer is copper.

3. The metal/polymer laminate of Claim 1, wherein the metal layers are the same and are selected from the group consisting of copper, steel, aluminum, zinc and titanium, and the polymer layer comprises a polyethylene polymer.

4. The metal/polymer laminate of Claim 1, wherein the polymer is a polyethylene.

5. The metal/polymer laminate of Claim 1, wherein the thermoplastic polymer is selected from the group consisting of high density polyethylene, low density polyethylene, linear low density polyethylene, crosslinked polyethylene, and ultra high molecular weight polyethylene.

6. The metal/polymer laminate of Claim 1, wherein the silane is chemically grafted to the polymer.

7. The metal/polymer laminate of Claim 1, wherein the polymer is a foamed polymer.

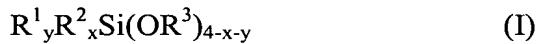
8. The metal/polymer laminate of Claim 1, consisting of a first metal layer, a polymer layer and a second metal layer.

9. The metal/polymer laminate of Claim 1, consisting essentially of two metal layers and one polymer layer.

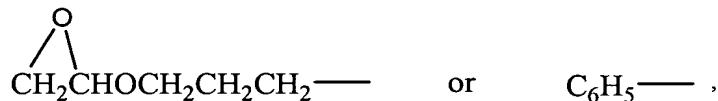
10. The metal/polymer laminate of Claim 1, wherein the exterior surface of at least one of the metal layers is textured.

11. The metal/polymer laminate of Claim 1, wherein the polymer layer is a composite further comprising a filler or reinforcing fiber.

12. A metal/polymer laminate comprising at least two metal layers, at least two adhesive interlayers and at least one core polymer layer between the adhesive interlayers, wherein at least one of the core polymer layer or the adhesive interlayers comprise a thermoplastic polymer and a silane of formula (I):



wherein R^2 is a C_{1-12} -hydrocarbon group containing one or more atoms selected from the group consisting of N, S and O,



R^3 is H-, C_{1-4} -alkyl;

R^1 is a C_{1-12} alkyl group that may be ethylenically unsaturated;

x is an integer of 1 to 3; and

y is an integer of 0 to 2.

13. The metal/polymer laminate of Claim 12, wherein the adhesive interlayers comprise ethylene.

14. The metal/polymer laminate of Claim 12, wherein the metal layer is copper.

15. The metal/polymer laminate of Claim 12, wherein the metal layers are the same and are selected from the group consisting of copper, steel, aluminum, zinc and titanium, and the polymer layer comprises a polyethylene polymer.

16. The metal/polymer laminate of Claim 12, wherein the polymer is a polyethylene.

17. The metal/polymer laminate of Claim 12, wherein the thermoplastic polymer is selected from the group consisting of high density polyethylene, low density polyethylene, linear low density polyethylene, crosslinked polyethylene, and ultra high molecular weight polyethylene.

18. The metal/polymer laminate of Claim 12, wherein the adhesive interlayer comprises a thermoplastic polymer comprising a silane chemically grafted to the thermoplastic polymer of the adhesive interlayer.

19. The metal/polymer laminate of Claim 12, wherein the polymer is a foamed polymer.

20. The metal/polymer laminate of Claim 12, consisting of, in the following order, a first metal layer, a first adhesive interlayer, a core polymer layer, a second adhesive interlayer, and a second metal layer.

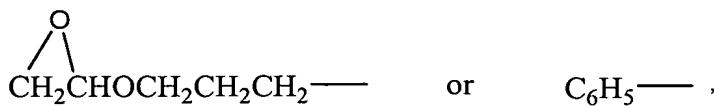
21. The metal/polymer laminate of Claim 12, wherein the exterior surface of at least one of the metal layers is textured.

22. The metal/polymer laminate of Claim 12, wherein one or more of the core polymer layer or the adhesive interlayers comprise a filler or a reinforcing fiber.

23. A metal/polymer laminate comprising at least two metal layers and at least one core polymer layer between at least two metal layers, and wherein a silane of formula (I) is present on the surface of the metal layers contacting the core polymer layer:



wherein R^2 is a C_{1-12} -hydrocarbon group containing one or more atoms selected from the group consisting of N, S and O,



R^3 is H-, C_{1-4} -alkyl;

R^1 is a C_{1-12} alkyl group that may be ethylenically unsaturated;

x is an integer of 1 to 3; and

y is an integer of 0 to 2.

24. The metal/polymer laminate of Claim 23, wherein the metal layer is copper.

25. The metal/polymer laminate of Claim 23, wherein the metal layers are the same and are selected from the group consisting of copper, steel, aluminum, zinc and titanium, and the polymer layer comprises a polyethylene polymer.

26. The metal/polymer laminate of Claim 23, wherein the polymer is a polyethylene.

27. The metal/polymer laminate of Claim 23, wherein the thermoplastic polymer is selected from the group consisting of high density polyethylene, low density polyethylene, linear low density polyethylene, crosslinked polyethylene, and ultra high molecular weight polyethylene.

28. The metal/polymer laminate of Claim 23, wherein the silane is chemically grafted to the polymer.

29. The metal/polymer laminate of Claim 23, wherein the polymer is a foamed polymer.

30. The metal/polymer laminate of Claim 23, consisting of a first metal layer, a polymer layer and a second metal layer.

31. The metal/polymer laminate of Claim 23, consisting essentially of two metal layers and one polymer layer.

32. The metal/polymer laminate of Claim 23, wherein the exterior surface of at least one of the metal layers is textured.

33. The metal/polymer laminate of Claim 23, wherein the polymer layer is a composite further comprising a filler or reinforcing fiber.

34. The metal/polymer laminate of Claim 23, wherein the metal/polymer laminate is obtained by applying the silane onto at least one surfaces of both metal layers to form silane-coated metal surfaces then contacting the silane coated metal surfaces with opposite sides of the core polymer layer.

35. The metal/polymer laminate of Claim 23, further comprising at least two adhesive interlayers comprising a thermoplastic resin.